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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,046

04/21/2005

Shoichiro Shimoike

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EXAMINER

PHAN, THIEM D

ART UNIT

PAPER NUMBER

3729

MAIL DATE

DELIVERY MODE

06/23/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,046	Applicant(s) SHIMOIKE, SHOICHIRO	
	Examiner THIEM PHAN	Art Unit 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 5-7 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,3,4/2,4/3 is/are allowed.
- 6) ☒ Claim(s) 1,4/1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed on 3/07/08 has been fully considered and made of record.

Specification

2. The disclosure is objected to because of the following informalities:

On page 1, before “BACKGROUND OF THE INVENTION”, insert:

“CROSS-REFERENCE TO RELATED APPLICATION

This application is the U.S. National Phase under 35 U.S.C. 371 of International Application PCT/JP03/13143, filed 10/14/03, which claims priority to Japanese Patent Application No. 2002-305941, filed 10/21/02.”

See Patent Rule 1.78(a) and provide appropriate correction.

Drawings

3. Figures 9 and 10 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

Art Unit: 3729

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 4/1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' Admitted Prior Art, hereinafter AAPA, in view of Suzuki Yasuo (JP 2001-230567).

With regard to claim 1, AAPA teaches a process of arranging the multishaft servo-amplifier modules of identical shape (Fig. 10, 93) and an identical function to each other and has semiconductor power elements (Page 3, lines 23-26), which reads on applicants' claimed invention, comprising:

- preparing a multishaft interface substrate, that constitutes a multishaft servo-amplifier function unit for a host controller (Page 4, line 9), as a base plate (Fig. 10, 91) on which the plurality of multishaft servo-amplifier modules (Fig. 10, 93) are mounted; wherein each of the plurality of multishaft servo-amplifier modules including a printed board (103) and a semiconductor power element (Page 3, lines 24 & 25) carried on the printed board;
- mounting the multishaft servo-amplifier modules on surfaces of the multishaft interface substrate in parallel (Fig. 10, 93) therewith; except for mounting the multishaft servo-amplifier modules on the both surfaces of the multishaft interface substrate.

Suzuki Yasuo teaches an electronic circuit case where the electronic circuits (Fig. 2, 5) are arranged on both surfaces of the printed circuit board (Fig. 2, 4) in order to improve the packaging density of the electronic circuitry (Paragraph 17, last line).

It would be obvious to one of ordinary skill in the art at the time invention was made to provide AAPA with the two sides structural arrangement of electronic components, as taught by Suzuki Yasuo and not its original devices, in order to improve the packaging density of the multishaft servo-amplifier modules on both surfaces of the multishaft interface substrate.

With regard to claim 4/1, AAPA teaches a process of arranging the multishaft servo-amplifier modules of identical shape (Fig. 10, 93) and identical function to each other and having semiconductor power elements (Page 3, lines 23-26) on a base plate (Fig. 10, 91) of a movable part of a machine (Paragraph 2), which reads on applicants' claimed invention; except for mounting the multishaft servo-amplifier modules on their most flat structural modules to decrease the thickness of the system.

Suzuki Yasuo teaches an electronic circuit case where the electronic circuits (Fig. 2, 5) are arranged at their utmost flat structural devices on both surfaces of the printed circuit board (Fig. 2, 4) in order to improve the packaging density of the electronic circuitry (Paragraph 17, last line).

It would be obvious to one of ordinary skill in the art at the time invention was made to provide AAPA with the two sides structural arrangement of electronic components at their utmost flat structural devices, as taught by Suzuki Yasuo and not its original devices, in order to improve the packaging density of the multishaft servo-amplifier modules on both surfaces of the multishaft interface substrate without increasing the thickness of the system.

Allowable Claims

6. Claims 2, 3, 4/2 and 4/3 are allowed.

Response to Arguments

7. Applicant's arguments filed 03/07/08 have been fully considered but they are not persuasive for the following reasons:

With respect to Claims 1 and 4/1, applicant urges that it is not appropriate to combine the prior art AAPA in view of Suzuki in the 103(a) rejection. In response to applicant's argument that there is no obviousness to combine the art, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. The teaching of Suzuki is about the mounting of devices on both sides of a surface and the combination with AAPA teaching servo-modules is to apply the mounting structure of Suzuki and not its specific parts in order to improve the package density of the servo-modules. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Furthermore, in view of the recent Supreme Court's decision in the *KSR* case, 72 FR 57526. In the guidelines seven possible rationales are laid out for an obviousness rejection: "(A) Combining prior art elements according to known methods to yield predictable results; (B) Simple substitution of one known element for another to obtain predictable results; (C) Use of known technique to improve similar devices (methods, or products) in the same way; (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results; (E) 'Obvious to try'--choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; (F) Known work in one field of

Art Unit: 3729

endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art; (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention." *Id.* at 57529. The rejection of claims 1 and 4/1 under 103(a) is applied with respect to the above decision.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 3729

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Phan whose telephone number is 571-272-4568. The examiner can normally be reached on M & Tu, 6AM - 2PM, and W & Th, 9AM – 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tim Phan
Examiner
Art Unit 3729

/A. Dexter Tugbang/
Primary Examiner
Art Unit 3729

tp
June 18, 2008